

Name: _____

Purpose: To see how water can be contaminated by illegal dumping and how to find the source of contamination.

Materials:

- Map
- Medicine bottles with 20 beans in them

Procedure:

1. Look at the map and decide which locations might be suspicious for "midnight dumping".
2. Decide on the coordinates where you want to "test" first.
3. Send a person up to get a test sample of "ground water" from your teacher.
4. Sample each by taking out beans one at a time and noting whether they are white(clean) or navy(pollution). Record your results. Put the bean back each time. Draw out of the vial 20 times.
5. Each well drilled will cost you \$800 for the first sample and \$200 for each additional sample. You will be paid \$10,000 for your work. Keep track of your costs.
6. Quit when you think you have the spot located.

Prediction: How much money will your team make, after expenses?

Data:

Coordinates	Yellow	Green	Cost

\$10,000 (what you were paid for the job)

Subtract your costs

= Your profit.

Divide it by your number of employees.

Analysis:

1. What site did you identify?
 - a. How many spaces off were you?
2. Why do people do "midnight dumping"?
3. Where does pollution go that is dumped on the soil?
4. Why do wells "attract" pollution?
5. Why is it a good idea to do more than one test on a well?
6. How would identifying the wrong site affect your company financially?
7. What should you do if you see someone illegally dumping or spilling chemicals?
8. How do the physical and chemical properties of water relate to water pollution?

Conclusion: (Identify two things you learned from the activity.)

- 1.
- 2.